

**Notice of Allowability**

Application No.

10/699,037

Examiner

Farah Faroul

Applicant(s)

BROWN ET AL.

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to July 2, 2007.
2. ☒ The allowed claim(s) is/are 1-23.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_

7. ☒ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other \_\_\_\_\_

  
FIRMIN BACKER  
PRIMARY EXAMINER

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Joseph B. Ryan on July 5, 2007.

The application has been amended as follows:

In the claims:

The listing of the claims will replace all prior version and listing of the claims in the application:

Listing of the claims:

1. (Original) A processor comprising:

controller circuitry operative to control performance monitoring for at least one flow of protocol data units received by the processor;

the controller circuitry comprising a classifier and being operative to access memory circuitry associated with the processor;

wherein the classifier is configured to perform at least a first pass classification of at least a subset of the protocol data units;

the controller circuitry in conjunction with a first pass classification of a protocol data unit of a first type being operative to execute a first script, and in conjunction with a first pass classification of a protocol data unit of a second type being operative to

Art Unit: 2616

execute a second script different than the first script, a result of execution of at least one of the first and second scripts being storable in the memory circuitry;

wherein a performance monitoring output is generated, responsive to receipt of the protocol data unit of the second type, based at least in part of the result of execution of at least one of the first and second scripts.

2. (Original) The processor of claim 1 wherein the performance monitoring output is generated in conjunction with a second pass classification of the protocol data unit of the second type.

3. (Original) The processor of claim 1 wherein in conjunction with a second pass classification of the protocol data unit of the second type, the controller circuitry is further operative to execute a function or other type of script, this additional execution causing the retrieval of a result of execution of the second script from the memory circuitry, the performance monitoring output being generated based at least in part on the result of execution of the second script.

4. (Original) The processor of claim 1 wherein the controller circuitry further comprises a compute engine and a traffic manager, the compute engine being operative to execute the first and second scripts, and the traffic manager being operative to generate the performance monitoring output based at least in part on the results of execution of the first and second scripts.

Art Unit: 2616

5. (Original) The processor of claim 1 wherein the protocol data unit of the first type comprises a user protocol data unit, and the protocol data unit of the second type comprises a forward performance monitoring (FPM) protocol data unit.

6. (Original) The processor of claim 1 wherein the performance monitoring output comprises a backward reporting protocol data unit.

7. (Original) The processor of claim 1 wherein at least one of the protocol data units comprises an asynchronous transfer mode (ATM) cell.

8. (Original) The processor of claim 1 wherein the performance monitoring is performed in a manner compliant with an I.610 protocol.

9. (Original) The processor of claim 1 wherein the first script when executed causes the controller circuitry to increment a count of a plurality of protocol data units of the first type.

10. (Original) The processor of claim 1 wherein the first script when executed causes the controller circuitry to generate accumulated parity information over a plurality of protocol data units of the first type.

Art Unit: 2616

11. (Original) The processor of claim 1 wherein the second script when executed causes the controller circuitry to calculate a backwards reporting result based at least in part on a result of execution in the first script.

12. (Original) The processor of claim 11 wherein the backwards reporting result is storable in a circular first-in first-out portion of the memory circuitry.

13. (Original) The processor of claim 12 wherein in conjunction with a second pass classification of the protocol data unit of the second type, the controller circuitry is further operative to execute an additional function or other type of script, the additional execution causing the retrieval of the backwards reporting result from the circular first-in first-out portion of the memory circuitry.

14. (Original) The processor of claim 13 wherein the performance monitoring output is generated utilizing the protocol data unit of the second type and the retrieved backwards reporting result.

15. (Original) The processor of claim 11 wherein the backwards reporting results indicates how many protocol data units of the first type has been received, up to the time of receipt of a protocol data unit of the second type, since receipt of a previous protocol data unit of the second type.

Art Unit: 2616

16. (Original) The processor of claim 11 wherein the backwards reporting result indicates if any errors are present in the protocol data units of the first type.

17. (Original) The processor of claim 11 wherein the backwards reporting result is utilized to compute statistics for the flow, the statistics being storable on a per-flow basis in a portion of the memory circuitry.

18. (Original) The processor of claim 1 wherein the memory circuitry comprises an external memory of the processor.

19. (Original) The processor of claim 1 wherein the processor is configured to provide an interface for communication of the received protocol data units between a network and a switch fabric.

20. (Original) The processor of claim 1 wherein the processor comprises a network processor.

21. (Original) The processor of claim 1 wherein the processor is configured as an integrated circuit.

22. (Original) A method for use in a processor comprising controller circuitry operative to control performance monitoring for at least one flow of protocol data units received by

the processor, the controller circuitry comprising a classifier and being operative to access memory circuitry associated with the processor, wherein the classifier is configured to perform at least a first pass classification of at least a subset of the protocol data units, the method comprising the steps of:

- executing a first script in conjunction with a first pass classification of a protocol data unit of a first type;

- executing a second script different than the first script in conjunction with a first pass classification of a protocol data unit of a second type;

- storing a result of execution of at least one of the first and second scripts in the memory circuitry; and

- generating a performance monitoring output, responsive to receipt of the protocol data unit of the second type, based at least in part on the result of execution of at least one of the first and second scripts.

23. (Currently amended) An article of manufacture comprising a [machine-readable] computer-readable storage medium having program code stored thereon for use in a processor comprising controller circuitry operative to control performance monitoring for at least one flow of protocol data units received by the processor, the controller circuitry comprising a classifier and being operative to access memory circuitry associated with the processor, wherein the classifier is configured to perform at least a first pass classification of at least a subset of the protocol data units, the program when executed in the processor implemented the steps of:

executing a first script in conjunction with a first pass classification of a protocol data unit of a first type;

executing a second script different than the first script in conjunction with a first pass classification of a protocol data unit of a second type;

storing a result of execution of at least one of the first and second scripts in the memory circuitry; and

generating a performance monitoring output, responsive to receipt of the protocol data unit of the second type, based at least in part on the result of execution of at least one of the first and second scripts.

### ***Response to Arguments***

2. Applicant's arguments, see page 8, filed on July 2, 2007, with respect to claims 1, 19, and 21-23 have been fully considered and are persuasive. The objection of claims 1, 19, and 21-23 has been withdrawn. Applicant has argued that the term "configured to" is a positive recitation. The examiner agrees.

### ***Conclusion***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Farah Faroul whose telephone number is 571-270-1421. The examiner can normally be reached on Monday - Friday 6:30 AM - 4 PM EST.




Art Unit: 2616

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

F. Faroul

  
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